

TITLE OF THE INVENTION

System for and Method of Individual Annuity Payout Administration

CROSS-REFERENCE TO RELATED APPLICATION

5 This application is a continuation-in-part of commonly owned U.S. Patent Application Serial No. 09/625,048 for "System for and Method of Variable Annuity Contract Administration," filed July 25, 2000, the disclosure of which is incorporated herein by reference as though fully set forth herein.

BACKGROUND OF INVENTION

1. Field of the Invention

The present invention relates to the financial vehicle known as an individual annuity contract. More particularly, the present invention relates to a system for and method of administering payouts under an individual annuity contract.

2. Description of the Prior Art

When an individual retires and no longer collects a salary, he or she needs a way to be able to maintain the same quality of living as he or she enjoyed prior to retirement. Through the purchase of annuity contracts, individuals are provided with an opportunity to meet their retirement needs. As those of ordinary skill in the art know, an annuity is an insurance contract issued by an insurance company where the insurance company makes future payments to the contract owner based on the value at retirement of amounts paid in to the annuity. The contract owner is the person who owns the annuity, while an annuitant is the person on whose life the annuity payments are based. Depending on the payout option chosen, this stream of payments can

be for life, for life with a period certain, etc. There are many payout options available with annuities in today's marketplace, as those of ordinary skill in the art will appreciate.

There are two types of individual annuities, fixed and variable. With a fixed annuity, interest will accrue on monies paid in by the contract owner at a rate set by the insurance company 5 during the accumulation phase. The interest earned is guaranteed in the contract for a certain period of time. Taxes are deferred on the accumulated interest and annuity payout options are available. A variable annuity provides benefits that vary directly based on the investment experience of the investment option chosen, such as a particular stock fund. With a variable annuity, the contract owner can make deposits into a variety of mutual fund subaccounts offered through the annuity, defer the taxes on income and gains from these funds, and convert the funds to an income stream for the rest of the contract owner's lifetime. There are fluctuations in the accumulation value of a variable annuity as the investment experience of the investments is passed directly to the contract owner. Because of the many different investment options available, variable annuities are the more popular type of annuity in today's marketplace.

10 An individual annuity contract has two phases. The first phase is the accumulation phase of the contract. The second phase is the payout phase of the contract. During the payout phase of the contract, the contract owner has the choice of a number of different payout options. The various payout options protect the contract owner from the adverse consequences of living too long and outliving his or her money.

20 As the individual annuity has evolved and as individual annuities have become more popular in the marketplace, there have been many innovations in this area. For example, various types of death benefits, living benefits, guaranteed minimum income benefits, bonus investment credits for the contract owners at issue, disability benefits, payout options, etc., have been

developed. In the current individual annuity contract marketplace, there are many different individual annuity contracts with many different features, and it is expected that there will continue to be many innovations in the individual annuity field and many more additional product features in the future.

5 In the payout phase, life annuities pay certain amounts of money as long as the insured annuitant survives. For prior art life annuities, after the payout commences, the annuity principal is not available for withdrawal and is not available upon the annuitant's death. To pay out the principal of a life annuity upon death or to make it available for withdrawal would affect the calculated redistribution of these amounts back to surviving annuitants, and would reduce the amount of the payment that an annuitant would receive from the beginning. Thus, the life annuity payout options offered with prior art individual annuity contracts do not allow the annuitant to withdraw principal after payout has commenced.

10 Liquidity characteristics of different payout options of individual annuities are a feature that is closely examined by prospective contract owners. Typically, people are afraid to tie up their money should an emergency arise, and they desire the ability to access the principal if needed. There are many reasons that an annuity contract owner might need access to the principal, such as serious illness, financial reverses, etc. Due to this lack of liquidity, many 15 owners of annuity contracts never choose a life annuity payout option, as the principal cannot be accessed after payout begins.

20 Although there are many different types of prior art annuity payout options available in the marketplace with respect to life annuities, there are none that offer the annuitant the option to withdraw principal during the payout phase. The result is that many potential annuity owners avoid life annuity payout options, creating a large untapped market potential.

In view of the foregoing, it is clear that there is a need in the marketplace for an annuity payout option under which the contract owner can withdraw principal from the annuity during the payout phase.

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SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide a system for and method of individual annuity payout administration which overcomes the problems associated with the prior art. It is another object of the present invention to provide a system for and method of individual annuity payout administration for an individual annuity contract with a payout option which enables the contract owner to withdraw principal from the annuity once payout has started. It is yet another object of the present invention to provide a system for and method of individual annuity payout administration for an individual annuity contract with a payout option which enables the contract owner to withdraw principal from the annuity once payout has started and where the payout option meets the retirement needs of the owner.

In accordance with one embodiment of the present invention, a system for administering a payout option of an individual annuity contract is provided comprising a memory for storing data relating to an individual annuity contract of a contract owner, said individual annuity contract having an associated payout option which permits the contract owner to withdraw principal from the annuity during a payout phase of the individual annuity contract; and a processor operatively coupled to the memory configured to calculate and issue a payout in response to a request from the contract owner for a withdrawal of an amount of principal from the annuity.

In accordance with another embodiment of the present invention, a method of administering a payout option of an individual annuity contract is provided comprising the steps of

storing data relating to an individual annuity contract of a contract owner in a memory, said individual annuity contract having an associated payout option which permits the contract owner to withdraw principal from the annuity during a payout phase of the individual annuity contract; receiving a request from the contract owner for a withdrawal of an amount of principal from the 5 annuity; and calculating and issuing a payout to the contract owner in response to the request.

The present invention will now be described in greater detail, with frequent reference being made to the drawings identified below in which identical numerals represent identical elements.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings:

figure 1 is a block diagram of a system in accordance with one embodiment of the present invention;

figure 2 is a block diagram of an Annuity Module in accordance with one embodiment of the present invention;

figure 3 is a flow chart illustrating the operation of a Payout Routine in accordance with one embodiment of the present invention;

figure 4 is a flow chart illustrating the operation of a Payments to 100 Payout Routine in accordance with one embodiment of the present invention; and

20 figure 5 is a flow chart illustrating the operation of a Reserve Routine in accordance with one embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

The following description is presented to enable any person of ordinary skill in the art to practice the present invention. Modifications to the preferred embodiment will be readily apparent to those of ordinary skill in the art, and the disclosure set forth herein may be applied to other 5 embodiments and applications without departing from the spirit and scope of the present invention and appended claims. Thus, the present invention is not intended to be limited to the embodiments described, but is to be accorded the broadest scope consistent with the disclosure set forth herein.

As discussed above, the present invention relates to a system for and method of individual 10 annuity payout administration wherein the individual annuity contract includes a payout option which enables the contract owner to withdraw annuity principal during the annuity payout phase. An exemplary variable annuity contract which provides a payout option which enables principal withdrawal during the payout phase is attached as Appendix A to the parent case, U.S. Patent Application Serial No. 09/625,048. An exemplary fixed annuity contract which provides a payout 15 option which enables principal withdrawal during the payout phase is attached hereto as Appendix A. The copyright in the fixed annuity contract attached hereto as Appendix A is owned by The Guardian Life Insurance Company of America and no license is granted herein to make copies of the contract except as an appendix to a United States patent which issues hereon. Those of ordinary skill in the art will appreciate that the present invention is not limited to these particular 20 individual annuity contracts, but may be used in connection with any type of annuity contract, whether fixed or variable.

Referring to figure 1, a block diagram of a system in accordance with one embodiment of the present invention is shown. The system illustratively includes a central processing unit (CPU)

2 for controlling the operation of the system; input means 4 operatively coupled to the CPU 2, such as a keyboard, floppy drive, tape drive, computer network interface, etc., or any combination thereof, for inputting individual annuity contract data into the system; control means 5, such as a keyboard and/or mouse, for allowing a user to control the operation of the system; a monitor 6 and
5 printer 8 for system output; data storage means 9, such as a hard disk drive or tape drive or other memory means, operatively coupled to the input means 4 and CPU 2, said data storage means 9 including an Annuity Database 10 for storing data relating to each individual annuity contract administered by the system, including but not limited to, the name of the contract owner, the date of birth of the contract owner, the sex of the contract owner, the address of the contract owner, the
10 contract purchase date and amount, the amount of premium paid by the contract owner and the dates of payment thereof, the beneficiary named in the contract, the associated withdrawal charge percentages, the payout option selected by the contract owner including the annuitization date, and data relating to any events associated with each contract, such as data relating to any withdrawal made by a contract owner. If variable contracts are being handled, the Annuity Database 10 will also store additional data relating to each variable annuity contract administered by the system, including but not limited to, the associated bonus investment credit percentage, the associated asset-based commission percentage, the selected mutual fund allocations of the annuity, the number of fund units for each mutual fund, and whether a rider is chosen and what the terms of the rider are. The data storage means 9 further includes an Annuity Module 20 which includes
15 instructions to be executed by the CPU 2 for administering annuity contracts based on data stored in the Annuity Database 10. Referring again to figure 1, the system further includes a random-access-memory 11 ("RAM"), which may be used in addition to or in combination with the data storage means 9 to store contract data as well as other dynamic data; and a communications
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interface 13, such as a modem or network card, which can be used to communicate with other computers and computer networks.

In practice, the system will typically take the form of a personal computer running MS-DOS or Windows, but may take the form of a Unix workstation, a mainframe computer, a mid-range computer, or any other apparatus that can be configured to perform the functions described herein. The software described herein, including the Annuity Module 20, may be written in any programming language that is compatible with the system.

Referring to figure 2, a block diagram of the Annuity Module 20 is provided. The Annuity Module 20 includes a Contract Issue Routine 22 which is used to issue new annuity contracts; a Payment Processing Routine 24 which is used to process premium payments; a Compensation Routine 26 which is used to calculate commission payments to distributors; a Free Look Routine 28 which is used to process contract returns; a Withdrawal Routine 32 which is used to calculate withdrawal charges when money is withdrawn from an annuity by a contract owner; an Anniversary Routine 34 which is used to calculate annual account fees; a Payout Routine 36 which is used to calculate and make annuity payments once the contract is annuitized; a Reserve Routine 37 which is used to calculate reserves; and a Death Claim Routine 38 which is used to calculate the death benefit and pay the beneficiary when the annuitant dies. The present invention focuses primarily on the Payout Routine 36 and the Reserve Routine 37. A detailed discussion of the operation of the other routines of the Annuity Module 20 is provided in the parent case, commonly owned U.S. Patent Application Serial No. 09/625,048 which is incorporated herein by reference.

Referring to figure 3, a flow chart of the Payout Routine 36, which is used to process payout options during the payout phase, is provided. The first step in the Payout Routine 36 is to

determine whether the contract has annuitized by checking the Annuity Database **10** (step **148**), which includes checking the current date against the annuitization date. If the contract has not annuitized, then the Payout Routine **36** is terminated. Payouts only occur if the contract has annuitized. If the contract has annuitized, then the payout option selected by the contract owner is

5 determined from the Annuity Database **10** (step **150**).

In a preferred embodiment, the payout options available to the annuitant are: (1) a life annuity without a guaranteed payout period, (2) a life annuity with a 10 year guaranteed payout period, (3) an option where payments are made until age 100, and (4) a joint and survivor option that will make reduced payments to the survivor. However, any number of different payout options could be made available to the annuitant.

In accordance with a preferred embodiment of the present invention, the payout option where payments are made until age 100 permits principal withdrawals to be made once the contract has annuitized, while at the same time allowing the contract owner to receive payments for a period of time to meet his/her retirement needs. Under the payments until age 100 payout option, payments will cease once the annuitant has reached age 100. Those of ordinary skill in the art will appreciate, however, that the payout option of payments until age 100 is not necessarily limited to just age 100, but can be a payout option of payments to contract owners until any age which is chosen by the insurance company.

Compensation can also be paid to contract distributors for as long as annuity payments are

20 being made. The Compensation Routine **26** will process these compensation payments.

The next step in the Payout Routine **36** is to determine whether the Payments to 100 Payout option has been chosen (step **152**). If the Payments to 100 Payout option has not been selected, the payment amount based on the selected payout option is then calculated and a check

and confirmation statement are generated and mailed to the annuitant (step 156) and the Annuity Database is updated (step 158). For payout options other than the Payments to 100 Payout option, once the contract has annuitized, the contract may not be surrendered and a partial withdrawal may not be made. This is because annuity payments are calculated based on the payments being made until the annuitant dies or lives to the guaranteed payment payout date. To pay out the principal of a life annuity upon death or to make it available for withdrawal would affect the calculated redistribution of these amounts back to surviving annuitants, and would reduce the amount of the payment that an annuitant would receive from the beginning. This is the reason that prior art life annuities do not allow the annuitant to withdraw principal after payout has commenced. The payout routine will continue in this manner until all payments have been made (step 160).

If the Payments to 100 Payout option is chosen, an option to surrender the contract or to make a partial withdrawal of the principal is provided to the contract owner. Surrendering a contract means returning the contract to the insurance company and having the surrender value of the contract paid out, at which point the contract will terminate. The Payments to 100 Payout Routine 154 processes the payouts under this payout option.

Referring to figure 4, a flow chart of the Payments to 100 Payout Routine 154 is provided. As a first step, the annuity payment is calculated (step 162). Under the Payments to 100 Payout option, annuity payments will be made until the annuitant reaches age 100. If the annuitant were 20 to live past 100, annuity payments would cease. The number of annual payments under the Payments to 100 option is equal to 100 minus the annuitant's age on the annuitization date (hereinafter referred to as "n").

Payments in a variable annuity and a fixed annuity are made to the contract owner as a constant number of units with the value of the units varying at each payment date. At the annuity commencement date, the total amount annuitized is multiplied by an annuity factor. The annuity factor is determined by the mortality table that is stated in the contract, the age of the annuitant, and the amount that is being annuitized. For example, the annuity factor can be the dollar amount of the annuity payment purchased with each \$1,000 of proceeds applied. This result is then divided by the unit value to determine the number of units that are payable in each payment. At each payment date, the units payable are multiplied by the unit value (as determined by the value of the funds which comprise the annuity) at that time to determine the amount of the payment.

The interest rate used is the assumed investment return (AIR), which is chosen by the contract owner when the contract is annuitized. The preferred interest rate choices for the variable annuity contract are 0%, 3.5%, or 5%. The preferred interest rate choice for the fixed annuity contract is 3%. However, any AIR may be used in accordance with the present invention. The following formula is used to calculate the number of units that will be paid on each payment date when the AIR is not 0%:

$$\text{Units Paid} = (\text{Amount Annuitized}) * \frac{\text{Annuity Factor}}{\text{Unit Value}} \quad (\text{EQ. 1})$$

The annuity factor is equal to:

$$\frac{1}{((1-v^n)/ d)} \quad (\text{EQ.2})$$

where $v = 1/(1 + I_o)$, $I_o = \text{AIR}$ and $d = I_o v$

When the AIR is 0%, the number of units paid at the time of annuitization is calculated differently. The amount annuitized is divided by the number of payments that will be paid from the time of

annuitization until age 100. This result is then divided by the unit value at the time of annuitization. The resulting value is the number of units that will be paid on each payment date. The following formula is used to calculate the number of units that will be paid on each payment date when the AIR is 0%.

Once the annuity payment has been calculated, a check is produced and mailed to the annuitant (step 164). The Annuity Database 10 is then updated (step 166).

If the contract owner requests a partial withdrawal of the annuity principal (step 168), the first step is to determine whether the request meets the conditions for a partial withdrawal (step 170). The conditions for a partial withdrawal in accordance with a preferred embodiment of the present invention are as follows:

- the annuitant may not withdraw less than \$500;
- the present value of the remaining payments must be at least \$2,000;
- the remaining monthly payment is at least \$20 (or \$60 quarterly, \$120 semi-annually, or \$240 annually); and
- one partial withdrawal is permitted each quarter without charge and additional withdrawals are permitted at a charge not to exceed the lesser of \$25 or 2% of the amount withdrawn.

Those of ordinary skill in the art will appreciate that the present invention is not limited to the foregoing conditions. The conditions imposed on the contract owner will be based on actuarial calculations performed by the insurance company which issues the contract.

If the imposed conditions are met, the next step is to determine whether the contract was annuitized during the surrender charge period (step 172). The surrender charge period is the period in which a charge is assessed if any amount is withdrawn or surrendered. In most contracts, the charge is assessed as a percentage of the amount withdrawn or surrendered. If the 5 contract was annuitized during the surrender charge period, then, in accordance with a preferred embodiment, the surrender charges were initially waived. The present value of the percentage of the remaining payments that will be made will be reduced by the portion of the charge that was waived if the withdrawal is made during the surrender charge period of the contract, which will allow the recovery of the surrender charges that had been previously waived when the contract annuitized. The amount of this reduction is calculated as follows (step 174):

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$$\text{Reduction} = \frac{(\text{Amount waived}) \times (\% \text{ withdrawn}) \times (\text{number of payments not yet paid until the surrender charge of the contract in the deferred phase would have expired})}{\text{Total number of payments to be paid at time of annuitization until the surrender charge of the contract in the deferred phase would have expired}} \quad (\text{EQ.3})$$

The next step is to calculate the present value of the remaining payments. The present value of remaining payments is the present value of the stream of future annuity payments. For the purpose of the following formula, it is assumed that payments will be made on an annual basis:

$$\text{Present value} = (\text{percentage of annual payments to be withdrawn}) \times (\text{annual payment}) \times \frac{((1-v^n)/ d)}{v} \quad (\text{EQ.4})$$

where $v = 1/(1 + I_o)$, $I_o = \text{AIR}$ and $d = I_o \times v$

25 A check for the partial withdrawal and a confirmation statement are then produced and mailed out (step 176), and the Annuity Database 10 is updated (step 186). If the conditions for a

partial withdrawal have not been met, a partial withdrawal is not permitted and the Payments to 100 Payout Routine **154** is terminated.

If a partial withdrawal request is not made, the Payments to 100 Payout Routine **154** will check to see if the contract owner is requesting to surrender the contract (step **178**). If the contract 5 is being surrendered, the next step is to determine whether the contract was annuitized during the surrender charge period (step **180**). As indicated above, if the contract was annuitized during the surrender charge period, then, in a preferred embodiment, the surrender charges were initially waived. The present value of the percentage of the remaining payments that will not be made will be reduced by the portion of the charge that was waived. The amount of this reduction is calculated as follows (step **182**):

Reduction =
$$\frac{(\text{Amount waived}) \times (\% \text{ withdrawn}) \times (\text{number of payments not yet paid until the surrender charge of the contract in the deferred phase would have expired})}{\text{Total number of payments to be paid at time of annuitization until the surrender charge of the contract in the deferred phase would have expired}} \quad (\text{EQ.5})$$

The next step is to calculate the present value of the remaining payments. For the purpose of the following formula, it is assumed that payments will be made on an annual basis:

20 Present value =
$$(\text{annual payment}) \times ((1-v^n)/d) \quad (\text{EQ. 6})$$

25 where $v = 1/(1 + I_o)$, $I_o = \text{AIR}$ and $d = I_o v$

A surrender check and a confirmation statement are then produced and mailed out (step 184), and the Annuity Database **10** is updated (step **186**). If a request to surrender the contract has not been made, the Payments to 100 Payout Routine **154** is terminated.

While the contract is in force, reserves have to be calculated. Reserves are the amount of money that the insurance company puts aside to pay future claims. It is an actual amount that is shown on the annual statement of the insurance company and is required by law to be calculated. The Reserve Routine **37** of the Annuity Module **20** is used to calculate the reserves. A flow chart 5 of the Reserve Routine **37** is provided in figure 5. The first step in the Reserve Routine is to determine whether the contract is in the deferred phase, which is also known as the accumulation phase, or in the payout phase (step **188**). If the contract is in the deferred phase (step **190**), the reserve is calculated in accordance with state laws and regulations (step **196**) and the Annuity Database is updated (step **200**) and the Reserve Routine **37** is terminated. If the contract is in the payout phase (step **192**), it is necessary to determine whether the Payments to 100 Payout option has been chosen (step **194**). If the Payments to 100 Payout option has not been chosen, the reserve is calculated (step **196**), the Annuity Database **10** is updated (step **200**) and the Reserve Routine **37** is terminated. If the Payments to 100 Payout option has been chosen, it is then necessary to calculate the reserve when payment is made or money is withdrawn (step **198**). The reserve is calculated as follows:

$$\text{Reserve} = \text{Payment} * ((1-v^x)/d) \quad (\text{EQ.7})$$

where $v = 1/(1 + I_o)$, $I_o = \text{AIR}$, $d = I_o v$ and $x = \text{number of payments remaining}$

20 This value is then discounted, at an interest rate equal to the AIR, to the end of the year.

Once the reserve is calculated for the Payments to 100 Payout option, the Annuity Database **10** is updated (step **200**) and the Reserve Routine **37** is terminated.

Thus, in accordance with the foregoing the objects of the present invention are achieved. Modifications to the above would be obvious to those of ordinary skill in the art, but would not bring the invention so modified beyond the scope of the appended claims.